Supplemental Questionnaire for State Funded Entities on

Land Record Information and Mapping-Related Grant Applications

Numbers refer to specific NITC Land Record Information and Mapping Standards

For a complete listing of these standards and guidelines please see:

http://nitc.nebraska.gov/standards/3-202.html

1.1 Datum. Local government multipurpose GIS/LIS (Geographic Information System/Land Information System) and their associated geospatial data layers should be based on the North American Datum (NAD) 83 and the North American Vertical Datum (NAVD) 88. Any existing systems developed based on other datums should consider conversion to these datum.

Please describe how you would comply with this standard if you are awarded a Nebraska State Records Board grant.

1.2 Projection. The Nebraska Plane Coordinate System, NAD 83, should be used as the primary map projection system for the recording of positions in local land-data systems in Nebraska. Selection of any other projection should be done reluctantly and only after most careful consideration. The plane coordinate values for a point on the earth's surface may be expressed in either meters or feet.

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1.3 Geodetic Control. GIS/LIS systems developed with the goal of providing a multipurpose cadastre for local government use should be referenced to a local geodetic reference framework that is properly connected to the National Spatial Reference System (NSRS).

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1.4 Public Land Survey System Control.

1.4.1 PLSS Geodetic Framework. For all land in Nebraska that is subdivided according to the Public Land Survey System (PLSS), the geodetic reference framework for the cadastre should be the section corners of the PLSS for each section.

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1.4.2 Locate, Monument, and GPS Primary Corners. At a minimum, local government entities developing a geospatial land information system should initially invest in a precision Global Positioning System (GPS) survey to locate, re-monument as necessary, and obtain the geographic coordinates of the major boundary defining corners that legally define the boundaries of their county jurisdiction(s). These precision GPS survey coordinates for the boundary defining corners should be collected and integrated as framework data into the land information system. This effort should be coordinated with officials from the adjacent county(ies) to ensure agreement on the location of the shared corners.

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1.5 PLSS Base Map. Local governments considering the development of a multipurpose GIS, should consult with the Nebraska State Surveyor's Office to locate and access the best available data on the Public Land Survey System (PLSS) for their geographic area. To assist the State Surveyors Office in maintaining a repository of the best available PLSS data, local governments participating in the Nebraska Land Information System Program should share any enhanced PLSS data, for their geographic area, with the State Surveyors Office so that it might be integrated into the PLSS repository database.

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1.6 Ortho-base (Aerial Layer) or Base Maps. Both a Public Land Survey System base map and an orthophoto (surface features) base map should be used to provide the geospatial reference framework upon which a local government multipurpose land information system is developed. Both base maps should be tied to the National Spatial Reference System and have a level of spatial accuracy appropriate to the range of applications planned for a given area.

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1.7 Map Scale and Spatial Accuracy.

1.7.1 Minimum Horizontal Accuracy Standard. Public entities developing a GIS/LIS program should conduct data collection and development in a manner to achieve at least the minimum level of horizontal spatial accuracy consistent with the National Horizontal Map Accuracy Standards corresponding to a 1:12,000 (1"= 1,000') scale map (90% of the "well defined" horizontal locations must be within ±33.3 ft. of their real world location).

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1.8 Legal Lot and Parcel Layers. Two graphic data layers are necessary to provide the foundation for a wide variety of local government GIS/LIS applications that involve land subdivision and/or ownership.

a). The legal lot layer consisting of legal land subdivisions. These are aliquot portions of the PLSS, filed subdivision plats and irregular tracts defined by filed deeds.

b). The parcel layer that defines ownership tracts of land. These tracts may group multiple legal lots into one taxable account and that typically represents the boundaries of a landowner's property. These data layers include locational coordinates for points representing property corners, lines between property corners representing property boundaries and closed polygons representing the property area.

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1.9 Parcel Identifiers.

a). Each county/region should adopt a system of unique, permanent feature identifiers (PID) that provide the link between each graphic land ownership parcel polygon and the attribute information (ownership, size, situs address, value, etc.) related to that specific land ownership property parcel.

b). A county/region PID system must be designed in a manner such that a unique, statewide PID can be defined and maintained for each property parcel by using the county FIPS code (Federal Information Processing Standards Publications) as a prefix to the county/region's PID system.

c). To maintain this unique one-to-one association between a specific property parcel and its related attribution information, new PIDs should be assigned whenever a property parcel is altered by either splitting it into two or more parcels or by combining two or more parcels to form a new parcel. The previous PIDs should not be used for these new modified parcels, but the historical PID associations should be maintained through a parent/child PID reference table.

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1.10 Spatial Data Format. A broad range of state and regional applications require property parcel information. Many of these applications require the combining of data across jurisdictional boundaries. To facilitate these applications, the property parcel spatial (graphic) data should be either maintained in a manner that allows it to be readily integrated in a common geographic data format (i.e., shapefile) or be capable of being exported into a common geographic data format (i.e., shapefile), while including the parcel identifiers.

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Data Sharing-Data Integration. A major focus of the State Records Board grant program is enhancing access to public records. Not only the general public, but also other public agencies benefit from facilitating access to public records. As noted in the NITC standard above there are numerous applications for which substantial benefits can be derived by integrating data across jurisdictional boundaries. Please describe whether your agency would be willing to share periodic updates of GIS-enabled property parcel data, such that other agencies might integrate that data into statewide or regional datasets to provide a resource for public agencies and the general public and any restrictions that you anticipate might apply. *(Note: this is not a current NITC standard, but is an interest of the State Records Board)*

1.11 Metadata. All geospatial land record databases, and their associated attribute databases should be documented with Federal Geographic Data Committee (FGDC) compliant metadata outlining how the data was derived, attribute field definitions and values, map projections, appropriate map scale, contact information, access and use restrictions, etc.

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1.12 Attribute Data. To provide the foundation necessary for a wide variety of local government applications, non-graphic, attribute data should be organized within the GIS/LIS, which describes individual property parcels relative to their basic parcel characteristics, tenure, value, history, buildings and units within the parcel, and tax status. In most cases, much of this attribute data will already exist in separate databases within a variety of local agencies and should be tied to the graphic property parcel via the unique PID. To meet a range of state and regional applications that require property parcel information, the following types of property parcel data should be maintained (for every property parcel?) and (be) available in a manner that allows it to be harvested, translated, and integrated into a statewide property parcel attribute dataset.

PID# ..... Parcel identifier (county FIPS code plus local government PID)
Situs Address..... Address of parcel (may be multiple fields)
Owner Address..... Address of property owner (may be multiple fields)
Township ..... Township #
Section..... Section #
Range ..... Range #
Range Direction..... East or West
Legal Description..... Narrative legal description of parcel
Assessed Value..... Total assessed value of property (land and improvements)
Land Value..... Assessed value of land
Area (Deeded) ..... Area of parcel according to the deed
Property Class ..... (Res, Ag, Com, Rec., Ind.)
Property Sub-class ..... i.e., Ag (Dryland, Irrigated, Grassland/Pasture, Waste)
Ownership type..... Federal, State, County, Private, Tribal, Exempt, Other and Unknown
Tax District..... County ID plus Tax Dist. #
School District ..... State number definition
Landuse ..... Actual landuse with NPAT defined general categories
Property Parcel Type... NPAT defined categories
Status ..... (Vacant, Improved or Improved only) (NPAT defined)
Location ..... (Urban, Sub-urban, Rural)(NPAT defined)
City Size..... 1st class, 2nd class, primary, metro, or village
Source Document..... Sales/transfer reference or document (book & page)
Recording Date..... Most recent sales/transfer date
Sales Value..... Most recent sales value

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Collaboration. In most instances, the development of a local government GIS system and the related geospatial data involves a fairly costly initial upfront investment. These costs are frequently offset by the benefits gained through coordination and collaboration that an integrated GIS can bring to local government and related public entities. For example, with property parcel data and maps the County Register of Deeds, the County Surveyor, and the County Assessor all frequently maintain and make changes to aspects of this data and the data is also commonly used by local public safety agencies, local emergency responders, local transportation agencies and state agencies such as the Dept. of Revenue, Dept. of Roads, and Game and Parks Commission. Please describe the level and nature of any multi-agency/department involvement in the planning and proposed management of your proposed GIS system.